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National Geographic Crown of the Continent Geotourism MapGuide Usage Assessment

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National Geographic Crown of the Continent Geotourism MapGuide Usage Assessment

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Executive Summary

Geotourism and Geotravellers have been on Montana's radar since the 2008 publication of the Crown of the Continent Geotourism Mapguide. This study was conducted to gain information about the uses of the MapGuide (both the printed and website versions) and how this tool has influenced those who use it.

People who subscribed via e-mail to the Crown of the Continent newsletter, asked for the Crown of the Continent MapGuide, or started a "backpack" of itineraries on the Crown of the Continent website were the study population. Emails with a survey link were sent to 15,374 people resulting in a sample of 307 respondents who returned the completed web survey. Of the 1,226 people who opened the email, 25 percent responded. Results of the study show:

- Seventy-two percent of the sample used the website, print, or both types of MapGuides, while 28 percent reported that they had not used either of the guides.
- The printed MapGuide was mostly used to learn about the area (34%) and to do pre-trip planning (33%).
- Similarly, the website MapGuide was used for learning about the area (37%) and pre-trip planning (31%).
- Of the 28 percent who had not used the MapGuide(s) 59 percent simply did not know about the MapGuides while 29 percent checked 'other' and wrote in a variety of reasons for not using it.
- For those who had visited the area, the average number of trips taken by MapGuide "users" was 3.49 and "non-users" averaged 3.50 trips. The average number of nights the "users" spent away from home during their crown trip was 6.25, while the "non-users" averaged 5.41 nights.
- One-third of the respondents were influenced by the MapGuide to extend their trip and 15 percent indicated that they stayed two or more nights because of the guide.
- More than half of the respondents said the MapGuide influenced their choice of travel routes and 37 percent were influenced by their choice of where to spend their nights.
- Fifty-nine percent of people who used one of the guides visited a natural landmark because they saw it on the MapGuide. Visitor centers were chosen by 45 percent of "users" as a site they visited because they had seen it on the MapGuide and 42 percent cited trails/hikes they used because of the MapGuide.
- Thirty-eight percent of respondents indicated the MapGuide influenced them to purchase or eat locally grown food that was featured on the MapGuide. Seven percent donated to a cause because of suggestions on the MapGuide.

The Crown of the Continent MapGuide appears to be an influential tool on the choices many visitors make for visiting the area. The findings of this suggest that the Geotourism concept, as portrayed by the MapGuide, is a successful tool in visitor management.

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Introduction

Geotourism, or “tourism that sustains or enhances the geographical character of a place: its environment, culture, aesthetics, heritage, and wellbeing of its residents” (Stokes et al., 2003), has been embraced by the state of Montana to allow tourism to flourish in a sustainable manner. The Crown of the Continent, which includes northwest Montana, is one of the regions where a successful Geotourism MapGuide has been implemented. This region includes Northwest Montana, Southwest Alberta, and Southeast British Columbia and contains Waterton-Glacier International Peace Park.

National Geographic’s Center for Sustainable Destinations provides tools through which communities can build a sustainable tourism economy. The geotourism MapGuides are two-sided, map-brochures and are co-branded by National Geographic and the destination, in this case, the Crown of the Continent. The MapGuide is intended to be widely distributed free of charge (National Geographic, 2006).

National Geographic creates the map and provides guidelines in all facets of geotourism, but a local alliance is at the heart of this effort and provides all of the content for the guide. For the Crown of the Continent MapGuide, beginning in 2007, communities from around the region helped identify attributes that are “most distinctive of, or unique to, the locale” (National Geographic, 2006). These attributes highlight the culture and traditions, nature and environment, heritage sites, aesthetics, and visitor experiences within the Crown of the Continent area. Six hundred and forty MapGuide sites having these attributes were nominated to appear on the map/website with 130 of them being selected for the print guide and another 200 for the website.

The purpose of this project was to gain information about the uses of the MapGuide (both the printed and website versions) and how this tool has influenced those who use it. The objectives were to:

1. Understand how the printed MapGuide is being used.
2. Understand how the MapGuide website is being used.
3. Determine if the MapGuide use affected the visitor’s length of stay in Montana.
4. Determine if the MapGuide influenced the visitor’s choice of activities, accommodations, dining, sites or events visited.

Methods

A web survey was used for this project with the sample coming from a list of email addresses from people who have subscribed to the newsletter, asked for the Crown of the Continent MapGuide, or started a “backpack” of itineraries on the website. The survey instrument consisted of questions regarding their usage of the MapGuides, how they used them, and if the

guides influenced their decisions. Survey respondents were automatically routed to questions that corresponded with their answers to allow for tailoring the questions to respondents.

The survey was sent out by the Crown of the Continent Geotourism Coordinator on January 11, 2012. A reminder was sent one week later on January 18, 2012. A total of 15,374 emails were sent out with the link to the survey (See Appendix A for survey instrument). Of those emails, 1,226 (8%) were actually opened. The final sample size of completed surveys was 307 (2% of original population but a 25% response rate of those who opened the email).

Results

The results of this study are presented below and are arranged with subheadings to allow the reader to follow a logical path through the data. The first section discusses the sample as a whole, in terms of their use of the MapGuide and their background.

About the Sample

The first piece of information collected about the sample concerned their use of the MapGuide. Segmenting the sample by this criterion was crucial to how the survey unfolded. Respondents were more likely to be MapGuides users than not (72% user vs. 28% non-user). Thirty-seven percent of the sample used both the website and print MapGuides (Table 1). Twenty-seven percent reported that they had used neither guide. Throughout the remainder of this report, the data is often broken down by “users” and “non-users” of the MapGuides. Keep in mind that “non-users” may have seen the printed guide or viewed the website but did not actually employ these tools as of yet.

Table 1: Uses of the MapGuides

Use of the MapGuide (n=292)	% of respondents
Used both	37% (109)
Used only the printed MapGuide	19% (56)
Used only the website MapGuide	15% (45)
Used neither the printed or website	27% (82)
Total MapGuide Users	72% (210)
Total Non-users	28% (82)

Respondents included 157 males (54%) and 136 females (46%). Table 2 displays their education level with most holding a Bachelor’s Degree (32%). The average age of the respondents is 52 years with a range from 21 to 86.

Household income levels of the respondents are displayed in Table 3. Most people earn between \$25,000 and \$75,000 a year (43%) in U.S. dollars. They reside around the world but are mostly from the United States and Canada. Table 4 lists all of the U.S. states, foreign countries, and

Canadian provinces represented in the sample by five or more of the respondents. Alberta, Canada was the residence most often cited, followed by California and Washington.

Table 2: Education Level of Respondents

Education Level	% of respondents (n=293)
Bachelor's Degree	32% (93)
Master's Degree	21% (60)
Some college	19% (56)
Associate's Degree	11% (32)
High School	10% (29)
Doctorate	4% (13)
Some high school	3% (10)

Table 3: Income of Respondents

Income Level	% and # of respondents
Less than \$25,000	18% (47)
\$25,000 to less than \$50,000	22% (58)
\$50,000 to less than \$75,000	21% (55)
\$75,000 to less than \$100,000	16% (41)
\$100,000 to less than \$150,000	14% (37)
\$150,000 to less than \$200,000	5% (13)
\$200,000 or more	4% (10)

Table 4: Place of Residence

Residence**	Total Respondents, (n=307)	MapGuide Non-User	MapGuide User
Alberta, Canada	12% (37 with 17 living within C of C region)	3% (10)	9% (27)
California	7% (21)	2% (5)	5% (16)
Washington	6% (18)	2% (5)	4% (13)
Montana	4% (13 with 8 living within C of C region)	1% (2)	4% (11)
Michigan	4% (11)	--	4% (11)
British Columbia, Canada	3% (10)	1% (2)	3% (8)
Wisconsin	3% (9)	1% (4)	2% (5)
Illinois	3% (8)	<1% (1)	2% (7)
Ontario, Canada	3% (8)	1% (2)	2% (6)
Pennsylvania	3% (8)	1% (2)	2% (6)
Texas	3% (8)	1% (3)	2% (5)
Indiana	2% (7)	1% (2)	2% (5)
Kentucky	2% (7)	1% (4)	1% (3)
Minnesota	2% (7)	1% (2)	2% (5)
New York	2% (7)	1% (3)	1% (4)
Oregon	2% (7)	1% (2)	2% (5)
Spain	2% (6)	1% (3)	1% (3)
Virginia	2% (6)	<1% (1)	2% (5)

*percentages are rounded up

****other U.S. states represented:** Alaska, Arizona, Arkansas, Colorado, Connecticut, Delaware, Florida, Georgia, Idaho, India, Iowa, Kansas, Louisiana, Maine, Maryland, Mississippi, Massachusetts, Minnesota, Missouri, New Mexico, North Carolina, Ohio, Oklahoma, South Carolina, and Utah. **Other Canadian Provinces represented:** Quebec, Saskatchewan, and Yukon. **Other countries represented:** Argentina, Australia, Belgium, Brazil, Canada, Russia, France, Portugal, American Samoa, Croatia, Indonesia, Italy, Netherlands, Sweden, Ukraine, and Uruguay.

Crown of the Continent MapGuide Use

Respondents who indicated they used the printed guide, the website guide, or both were asked how they used the guides. The printed MapGuide was mostly used to learn about the area (34%) and to do pre-trip planning (33%) (Table 5). Twenty-two percent of respondents used the printed MapGuide during their trip and 17 percent viewed the MapGuide for entertainment. Only 13 percent had utilized the print guide for directions.

The website MapGuide was also used for learning about the area (37%) and pre-trip planning (31%). Twenty-one percent of respondents indicated that they used the website guide for directions, followed by 16 percent who viewed the website for entertainment (Table 5).

Table 5: Use of the MapGuides

Reason for use	<i>Printed MapGuide</i> Users	<i>Website MapGuide</i> Users
To learn about the area	34% (105)	37% (112)
Pre-trip planning	33% (101)	31% (94)
During trip	22% (66)	21% (64)
To view for entertainment	17% (53)	16% (20)
For directions	13% (40)	7% (20)
Other*	2% (6)	2% (6)

*other responses can be found in Appendix B

Respondents who indicated they had not used the MapGuide(s) were then asked why (Table 6). Of the 27 percent who did not use the MapGuide, most respondents (59%) simply did not know about the MapGuides while 29 percent indicated that the reason was not listed and responded “other”. Of that 29 percent, seven indicated they did not receive/request the guide. The remainder of the responses can be found in Appendix B.

Table 6: Reasons for not using the MapGuides

MapGuide non-users (n=82)	% and # of respondents
Did not know about them	59% (48)
Other*	29% (24)
Do not usually use maps	7% (6)
Already know the area	4% (3)
Find the map confusing	2% (2)

*qualitative data from “other” responses can be found in Appendix B.

Visits to the Crown of the Continent Area

Both groups (those who indicated they used one/both of the MapGuides and those who had not) were asked if they had visited the Crown of the Continent area for pleasure in the last four years (Table 7). This time frame was set to ensure they traveled when the MapGuide was in existence. Table 7 shows that “users” of the MapGuide were more likely to have visited the Crown of the Continent area.

Table 7: Pleasure Trip to the Crown of the Continent Area in the Last 4 Years

Pleasure trip taken?	% and # of Users	% and # of Non-Users
Yes	60% (128)	35% (28)
No	40% (85)	65% (53)

Crown of the Continent Area Trip Details

For those who had visited the area for pleasure, the average number of trips taken by MapGuide “users” was 3.49 and “non-users” averaged 3.5 trips. On average, “users” utilized the MapGuide for two-thirds of their trips taken to the Crown of the Continent area. The average number of nights the “users” spent away from home during their crown trip was 6.25, while the “non-users” averaged 5.41 nights.

Towns that both “users” and “non-users” of the MapGuide indicated they drove through on their pleasure trip are shown in Table 8. West Glacier, Kalispell, and Whitefish were driven through most frequently by “users” (59% to 60%) with “non-users” most frequently citing West Glacier, St. Mary, and East Glacier (38% each). Figure 1 shows the “user” data in a visual format with the percent of visitors being represented by different color schemes. Visitors concentrated themselves in and around Glacier National Park and spread from there. Figure 2 shows the “non-user” travel route data visually. The “non-user” data is less concentrated with less people traveling through the same towns.

Table 8: Percent of Respondents who included these Crown of the Continent Towns in their Travel Route

Crown of the Continent Towns Traveled*	% of “user” respondents, n=121	% of “non-user” respondents, n=24
West Glacier	60%	38%
Kalispell	60%	29%
Whitefish	59%	42%
St. Mary	56%	38%
Hungry Horse	46%	29%
Columbia Falls	42%	29%
East Glacier	38%	38%
Essex	34%	29%
Polson	33%	21%
Missoula	31%	29%
Browning	31%	25%
Waterton Park	30%	25%
Fort MacLeod	25%	25%
Cardston	25%	21%
Calgary	21%	33%
Pincher Creek	20%	21%
Lethbridge	12%	33%

*additional towns traveled through include: Bigfork, Browning, Missoula, Waterton Park, Fort MacLeod, Cardston, Elko, Calgary, Pincher Creek, Fernie, Eureka, Roosville, Sparwood, Cranbrook, Seeley Lake, Libby, Lethbridge, Bynum, Condon, Choteau, Fairmont Hot Springs, Troy, Hot Springs, Augusta, Ovando, Cut Bank, Thompson Falls, Lincoln, Invermere, Kellogg, Dupuyer, Twin Butte, Yahk, Elkford, Kimberly

Figure 1: Percent of MapGuide “Users” who included these Towns in their Travel Route



Figure 2: Percent of MapGuide “Non-Users” who included these Towns in their Travel Route

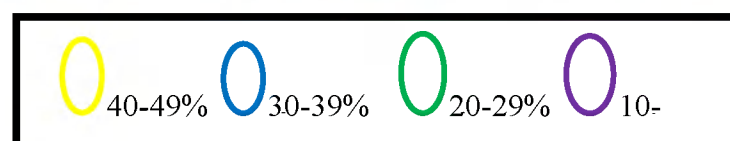
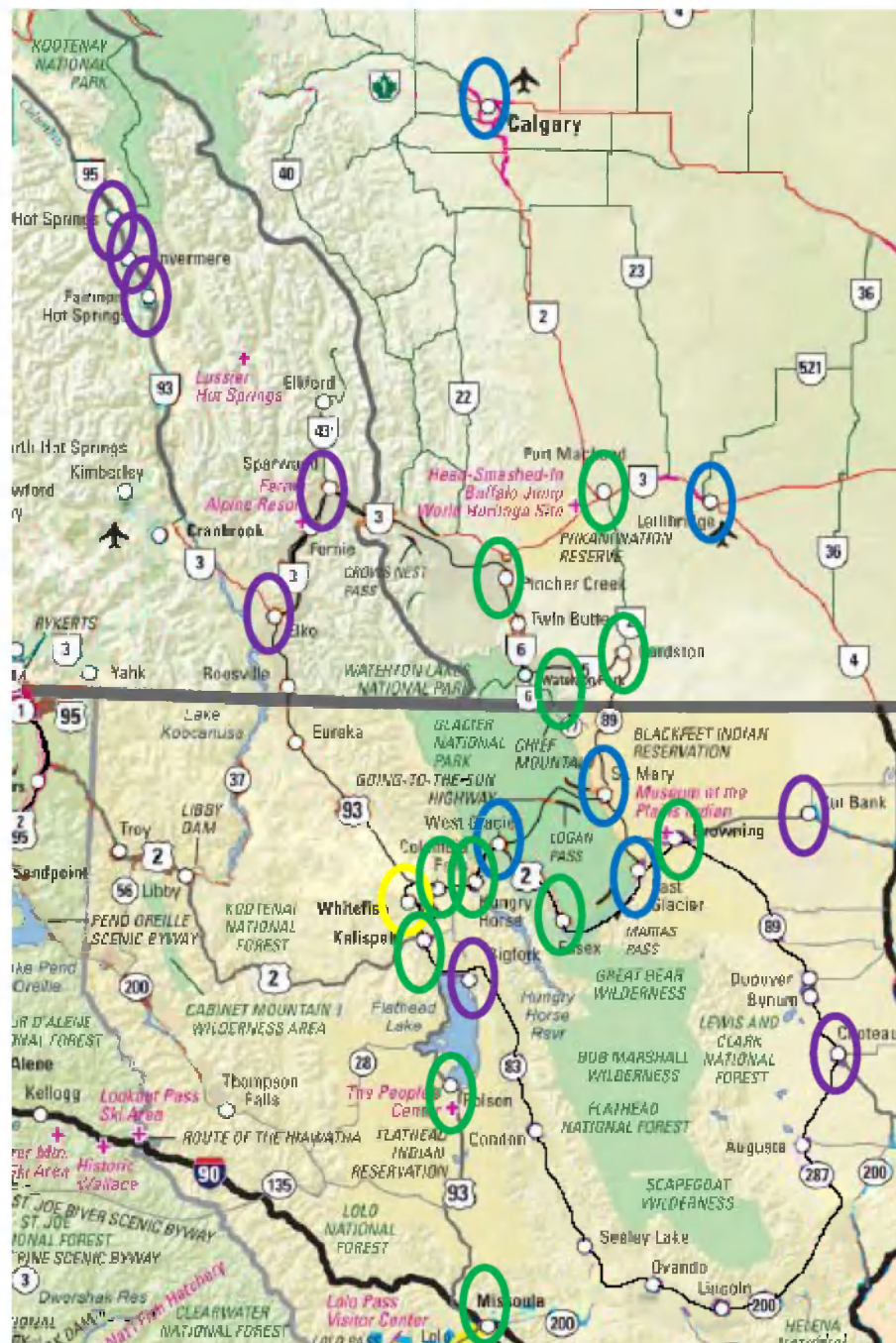


Table 9 shows the percentages of respondents spending at least one night in Crown of the Continent towns. This data is also broken down by “users” of the MapGuide and “non-users.” Whitefish was cited most frequently as a place respondents spent at least one night. This is true for both categories. For “users” of the guides, West Glacier was next highest but for “non-users” the next highest was Calgary. St. Mary was the third highest town for “users” but Missoula is next for “non-users”. Figures 3 and 4 present this data visually with one of the biggest differences between them being the concentration of people. Again, the data is spread out much more for “non-users.”

Table 9: Crown of the Continent Towns where Respondents Spent at least One Night

Crown of the Continent Towns where Nights were Spent*	% of “user” respondents	% of “non-user” respondents
Whitefish	26%	29%
West Glacier	22%	13%
St. Mary	19%	8%
Calgary	17%	25%
Kalispell	17%	13%
East Glacier	16%	8%
Missoula	15%	21%
Waterton Park	14%	8%
Fernie	9%	8%
Fort MacLeod	7%	17%
Cranbrook	7%	8%
Bigfork	4%	8%
Invermere	4%	8%
Polson	3%	13%
Bynum	3%	13%
Browning	3%	17%
Pincher Creek	3%	8%
Libby	3%	8%
Lethbridge	3%	13%
Hot Springs	2%	8%

*Additional nights spent in: Fort MacLeod, Cranbrook, Columbia Falls, Essex, Bigfork, Invermere, Hungry Horse, Browning, Cardston, Libby, Kimberly, Polson, Pincher Creek, Eureka, Seeley lake, Lethbridge, Twin Butte, Bynum, Elko, Condon, Fairmont Hot Springs, Hot Springs, Cut Bank, Sparwood, Roosville, Choteau, Thompson Falls, Dupuyer, Troy, Augusta, Ovando, Lincoln, Kellogg, Yahk, Elkford.

Figure 3: Percent of MapGuide “Users” who Over-Nighted in C of C Towns

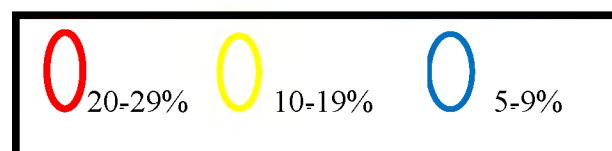
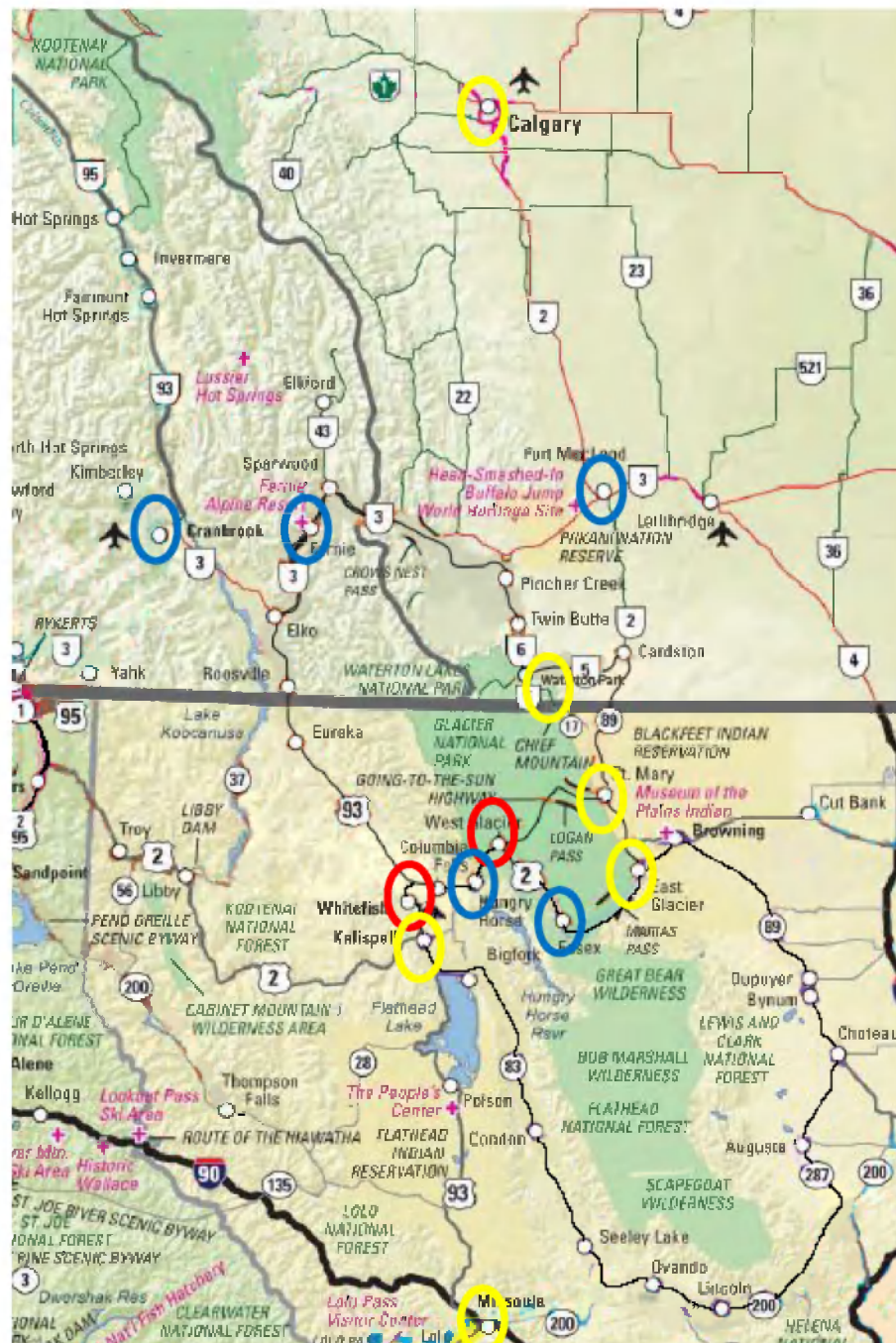
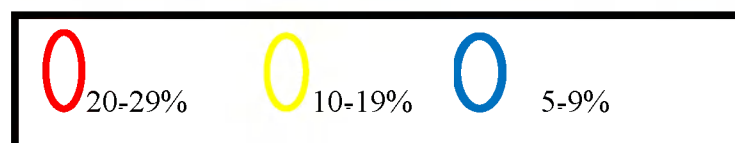
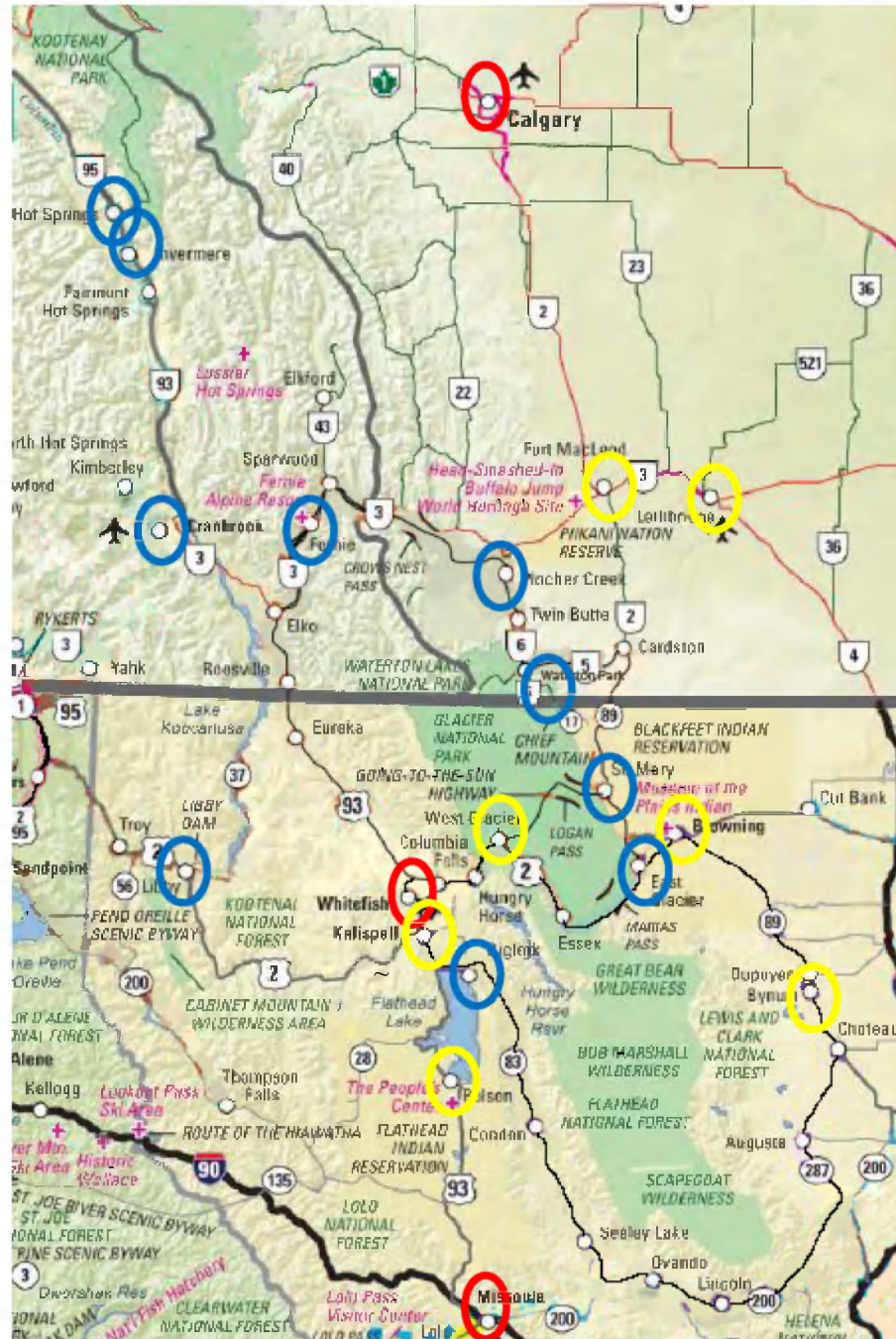


Figure 4: Percent of MapGuide “Non-Users” who Over-Nighted in C of C Towns



Influence of MapGuide

One of the main objectives of this study was to determine how the MapGuides are influencing people's travel decisions. To determine this we first asked if the MapGuide (print or website) influenced their length of stay on their most recent trip to the Crown of the Continent area. If the response was yes, they were asked to identify if the trip was shorter or longer because of the MapGuide (Table 10). Thirty-one percent of the respondents extended their length of stay anywhere between 1 hour and more than two nights. Sixty-eight percent of respondents indicated that their length of stay was not influenced by the MapGuide. Fifteen percent indicated that they stayed two or more nights because of the guide.

Table 10: Influence of MapGuide on Length of Stay

Influence on length of stay	% of respondents
No Influence	68%
2 or more nights longer	15%
1 night longer	10%
More than 4 hours but not overnight	5%
1-4 hours longer	2%
Shorter stay	1%

About half of the respondents felt that the MapGuides influenced their travel route, and as many as 37 percent indicated that the location of their overnight accommodations was influenced by the MapGuides (Table 11).

Table 11: Influence of MapGuide on Travel Route and Overnights

Influence on Travel Route	% of respondents
Yes	53%
No	47%
Influence on where Nights were Spent	% of respondents
Yes	37%
No	63%

As mentioned previously, there are many sites displayed on/in the MapGuides. One of the objectives of the study was to assess if the MapGuide was pointing people to these featured sites. As seen in Table 12, 59 percent of people who used one of the guides visited a natural landmark because they saw it on the MapGuide. Visitor centers were chosen by 45 percent of "users" as a site they visited because they had seen it on the MapGuide and 42 percent cited specific trails/hikes. Results show less influence of the MapGuide for festivals, art galleries, farmer's markets, and performing arts.

Table 12: Sites Visited because of MapGuide Influence

Site Visited because of MapGuide*	% and # of respondents
A natural landmark	59% (72)
A visitor center	45% (55)
A trail/hike	42% (52)
A historic site	39% (48)
A designated wilderness	38% (47)
A wildlife watching site	36% (44)
An eating/drinking establishment	30% (37)
A museum	27% (33)
A paid accommodation	21% (26)
None	15% (19)
A shop/boutique	15% (18)
A tour/guided trip	13% (16)
A festival	11% (13)
An art gallery	11% (13)
A farmer's market	7% (9)
A performing arts event	7% (8)
Other	6% (7)

*"other" responses can be found in Appendix B

Activities are also featured on/in the guides. Respondents were asked if they had participated in categories of activities featured on the MapGuides. Sixty percent of people indicated they were not influenced by the MapGuide to participate in these activities (Table 13). However, 38 percent said they purchased or ate locally grown food because it is a feature on the guides. Seven percent indicated they donated to a local cause because of the listing on the Mapguide. It is important to add that when respondents indicated that they visited a site or participated in an activity because of the MapGuide, they were encouraged to list the name and location of the site. All of these open-ended responses can be found in Appendix B.

Table 13: Activities participated in because they were on the MapGuide

Activity Participated in because of MapGuide*	%and # of respondents
None	60% (73)
Purchased or ate locally grown food	38% (46)
Donated	7% (9)
Volunteered	2% (2)

*"other" responses can be found in Appendix B

Discussion and Conclusions

The first objectives for this study were to determine the uses of the Crown of the Continent printed MapGuide and the website MapGuide. Nearly three-quarters of the people in this sample (72%) had used one of the MapGuides. In both cases (print and website), guides were used mostly for learning about the area and for doing pre-trip planning. These were both anticipated uses of the guides. Unlike traditional type print maps, fewer respondents in this sample used the print MapGuide on their trip (22%) than would be expected. An even smaller number of users indicated that they utilized the website guide while on their trip. This makes the distribution of the map before their trip even more important.

Most of those who had not used either MapGuide indicated they did not know about them. There were also some replies to the “other” option which cited not receiving them in the mail as the reason for not using the guides. It is unclear why these individuals who were on the Crown of the Continent geotourism email list were not aware of the guides. It is recommended that the Crown of the Continent Newsletter write a feature article on the MapGuide and how to use the guide for future trips.

Determining the influence of the MapGuides on travel decisions in the Crown of the Continent was an important aspect of this study. Influencing traveler decisions is critical to achieving the goals of the MapGuides and geotourism in general. It was found that most respondents (2/3) were not influenced by the guide to extend their trip length. However, one-third of the respondents were influenced to stay longer because of the MapGuide. Fifteen percent stayed two or more nights longer. Communities profit if visitors spend a few hours longer, therefore two nights is a fairly robust finding. Those who did not extend their trip due to the MapGuide were likely constrained due to time available, money available, or other logistical issues.

Influence of the MapGuides on people’s travel routes and location of their overnights were also of interest. Over one-half (53%) of the sample said that their travel route was influenced by the MapGuides, and over one-third (37%) were influenced by the MapGuide on where to spend the night. Travel routes are probably much more flexible than where they will sleep so this finding is not surprising. The MapGuide “users” spent more nights in the Crown of the Continent area which is also a way the MapGuides may have influenced travelers. However, that is simply surmised and not indicated by the data.

Looking at the travel routes of MapGuide “users” and “non-users,” one of the biggest differences seen visually is that visitors who used the guides are much more concentrated in the Glacier/Waterton Park areas. The respondents who had not used the guides were much more spread out with no single town seeing more than 42 percent of respondents travel through their area. The guides may have helped people pinpoint their destination towns. “Nonusers” were less likely to spend time in Glacier National Park on their pleasure trip.

With the focus of geotourism as the foundational concept for the MapGuides, goals for the MapGuide would include influencing visitors to behave and make decisions in a manner that is consistent with sustaining the environment, culture, aesthetics, heritage, and wellbeing of the destination and its residents. The guides have influenced many of the respondents in terms of the natural environment. Many (59%) said that they visited natural landmarks and hiked trails (42%) because they were highlighted in the guide(s). This is a hopeful sign that the concept of helping to sustain the environment may be realistic for the MapGuides. However, the activities that would have helped sustain the environment (volunteering to pull weeds for example) were not participated in very heavily by MapGuide “users.” Visitor centers and historic sites were also listed by many as something they visited because of the MapGuide. This draws attention to the culture and heritage piece of geotourism. Only 15 percent of respondents indicated they were not influenced to visit any of the sites because of the MapGuide.

Other results indicate that more “users” appear to be sticking close to the heart of the area, Glacier/Waterton National Peace Park than “non-users.” Perhaps additional focus on staying overnight in the periphery of the parks would encourage people to spread out a little more on their next trip. Also, people are using the maps to plan their trip and are visiting natural features, visitor centers, and historic sites because they are featured on the MapGuide.

From this analysis, it appears that the MapGuide(s) for the Crown of the Continent are being used by most people who have them and as a result numerous travel decisions are being influenced. The results of the study would indicate that local businesses who are on the MapGuides are more likely to experience geotravelers to their businesses. Perhaps, even, their business has experienced an increase in volume due to the MapGuides. That, however, cannot be determined by this study and it is recommended a study of businesses be conducted to confirm this assumption.

In summary, the Crown of the Continent MapGuide is an influential tool on the choices many visitors make while visiting the area. The findings of this suggest that the Geotourism concept, as portrayed by the MapGuide, is a successful tool in visitor management.

For more information about geotourism and how it has been evaluated in Montana, please see the following reports:

1. Geotourism in the Crown of the Continent: Developing and Testing the Geotourism Survey Instrument. <http://www.itrr.umt.edu/theses/GeotourismCoCBolevThesis.pdf>
2. Statewide Vacationers to Montana: Are They Geotravelers? http://www.itrr.umt.edu/research10/StatewideGeotourismRR2010_2.pdf

References

- Stokes, A.M., Cook, S.D., & Drew, D. (2003). *Geotourism: The New Trend in Travel*. Travel Industry America and National Geographic Traveler.
- National Geographic. (2006). *How to Develop a National Geographic Geotourism MapGuide*. Retrieved from http://travel.nationalgeographic.com/travel/sustainable/pdf/geotourism_mapguide.pdf.

Appendix A: Survey Instrument

Has anyone in your household used the Crown of the Continent printed Mapguide or the Crown of the Continent website Mapguide?

- Used neither the printed or website mapguides
- Used only the printed mapguide
- Used only the website mapguide
- Used both the printed and website mapguides

Why haven't you used the printed or website MapGuide? *(please check all that apply)*

- Did not know about them
- Do not usually use maps
- Already know the area well enough
- Find the map confusing
- Other...please specify below

How was the printed MapGuide used?

- For pre-trip planning
- During trip
- To view for entertainment
- To learn about the area
- For directions
- Other...please specify below

How was the website MapGuide used?

- For pre-trip planning
- During trip
- To view for entertainment
- To learn about the area
- For directions
- Other...please specify below

Where do you currently live in relation to the Crown of the Continent region? *(Map below represents Crown of the Continent region)*

- In the Crown of the Continent region.
- In Montana but outside the Crown of the Continent region.
- In Idaho but outside the Crown of the Continent region.
- In Alberta but outside the Crown of the Continent region.
- In British Columbia but outside the Crown of the Continent region.
- None of the areas mentioned above.

Please click on the town (or nearest town) in which you currently reside. **REFER TO MAP in FIGURE 1 for map example**

In the past four years, has anyone in your household taken a pleasure trip in the Crown of the Continent area (SW Alberta, SE British Columbia, NW Montana, NE Idaho)? (*Map below represents Crown of the Continent area*)

- Yes
- No

How many pleasure trips have been taken to this area in the past four years by members of your household?

- | | |
|---|-----|
| 1 | 6 |
| 2 | 7 |
| 3 | 8 |
| 4 | 9 |
| 5 | 10+ |

For how many of these trips was the MapGuide used for planning or for on-the-spot decisions?

- | | |
|---|-----|
| 0 | 6 |
| 1 | 7 |
| 2 | 8 |
| 3 | 9 |
| 4 | 10+ |

For the following questions, please reference the most recent pleasure trip to the Crown of the Continent area.

On the most recent pleasure trip to the Crown of the Continent area, did the MapGuide (printed or website) influence your length of stay?

- No influence
- Shorter stay
- 1-4 hours longer
- More than 4 hours but not overnight
- 1 night longer
- 2 or more nights longer

For that most recent Crown of the Continent pleasure trip, please click on all of the towns driven through. **REFER TO MAP in FIGURE 1 for example**

On that most recent pleasure trip to the Crown of the Continent region, did the MapGuide influence choice of travel routes in the area?

- Yes
- No

On that most recent pleasure trip, how many nights way from home were spent in the Crown of the Continent area?

- | | |
|---|-----|
| 0 | 6 |
| 1 | 7 |
| 2 | 8 |
| 3 | 9 |
| 4 | 10+ |
| 5 | |

Please click on all the towns where night(s) were spent. **REFER TO MAP in FIGURE 1 for example**

On that pleasure trip to the Crown of the Continent, did the MapGuide influence the choice of where to spend nights in the region (e.g. town/general area)?

- Yes
- No

Please check all of the sites on that pleasure trip that were visited specifically because they were listed on the MapGuide or website (*please check all that apply*):

- A paid accommodation
- An eating/drinking establishment
- A festival
- A farmer's market
- An art gallery
- A museum
- A performing arts event
- A historic site
- A natural landmark (lake, river, etc.)
- A designated wilderness area
- A trail/hike
- A shop/boutique
- A visitor center
- A wildlife watching site
- A tour/guided trip
- None
- Other please specify below

Please check all of the activities on that pleasure trip which were done specifically because they were listed on the MapGuide or website. (*please check all that apply*)

- Volunteered (e.g. trail work, weed pulling, habitat restoration)

- Donated to a cause or organization
- Purchased or ate locally grown food
- None
- Other...please specify below

In what U.S. state, Canadian province, or foreign country do you permanently reside?

What is your age?

What is your gender?

- Male
- Female

What is your highest completed level of education?

- Some High School
- Bachelor's degree
- High school diploma or the equivalent (GED)
- Some college
- Associates degree
- Masters degree
- Doctorate or professional degree

What best describes your annual household income? (USD)

- Less than \$25,000
- \$25,000 to less than \$50,000
- \$50,000 to less than \$75,000
- \$75,000 to less than \$100,000
- \$100,000 to less than \$150,000
- \$150,000 to less than \$200,000
- \$200,000 or more

Appendix B: Open-Ended Data

The following is a complete listing of the responses that people typed in to the survey. The question is listed above the responses. These are listed verbatim from respondents.

Question: Why haven't you used the Crown of the Continent MapGuides?

1. I live in Spain and nowadays I can't go to the states
2. will eventually as I am planning a trip in that area.
3. I didn't receive one.
4. I haven't received in the mail yet
5. Have not traveled to this region recently. (Since I knew these maps existed.)
6. I have not yet had occasion to plan a trip to these places
7. was out of the country
8. Cancelled plans to visit.
9. Haven't needed to use it.
10. didn't need to at this point
11. never received
12. Just haven't had time yet.
13. I never received it.
14. Haven't looked at because of timing. Everyone has been very busy lately.
15. don't have it
16. Did not receive the printed map and already use another map site.
17. Don't remember looking at either, or requesting them.
18. Haven't been able to get up there yet. However, goal is to get there within the next year or two.
19. I enjoy looking at the maps but don't travel...they allow me to armchair travel.
20. Never received the map.
21. Have not traveled since I got the map.
22. Our scheduled visit was cancelled and we have not been able to reschedule and make it up to the area yet. We are still planning on making the trip in the near future and will definitely be using the printed and website map.
23. Right now, too much going on in our lives to take the trip we'd hoped to take. So, I didn't take the time to look much at the map. I did glance at it, but not study it.
24. Have no idea what this is about.
25. It has been many years since visiting the area. I did not know about the information you provide. Now that I know, I will use the guide.

Question: How did you use the printed or website MapGuide? Responses to “other” option

1. And to find statistics for environmental reasons
2. Because I was interested in what you had produced.
3. For class presentation
4. As an overview, for familiarization and orientation
5. I tried to use it to get traveling ideas. But then I found it cluttered, not user friendly, hard to read the map to see the location I actually was viewing, and I wanted suggested itineraries already built for me.
6. Started using it as a useful tool in planning for visit from my family from the midwest, and found that there was so much information on the site that I wasn't aware of as a local, that it soon became an entertaining and interactive experience.

The following questions were only asked of the respondents who indicated that they had participated/visited something on the MapGuide.

Question: Please tell us the name(s) and location(s) of the accommodation(s).

- | | |
|-----------------------------|---------------------------------|
| 1. Lake McDonald Lodge | 9. Too much info. for this time |
| 2. Doubletree Hotel | 10. Kalispell and Whitefish |
| 3. Kalispell Hampton Inn | 11. Hilton Garden Inn Missoula |
| 4. Prince of Wales | 12. Holiday Inn Express |
| 5. Do not remember | 13. West Glacier Inn |
| 6. Glacier Trailhead Cabins | 14. St. Eugene |
| 7. St. Mary | 15. Somers, Kalispell |
| 8. Pine Lodge, Whitefish | |

Question: Please tell us the name(s) and location(s) of the eating/drinking establishment(s).

- | | |
|--------------------------------------------|-------------------------------|
| 1. do not remember | 11. Park Café |
| 2. Downtown Calgary | 12. various |
| 3. Eddies at Apgar Many Glacier restaurant | 13. Waterton restaurants |
| 4. Fernie | 14. Wrap and Roll |
| 5. Whitefish | 15. The Boathouse |
| 6. Bigfork | 16. Buffalo Café |
| 7. Olive Garden | 17. Whitefish Golf Course |
| 8. Park Café | 18. The Stube at Big Mountain |
| 9. Restaurant outside GNP | 19. Kandahar |
| 10. Sizzlers, Kalispell | |

Question: Please tell us the name(s) and location(s) of the natural landmarks(s).

1. Going to the sun Road
2. Banff National park
3. Beaver Mines Lake
4. waterfalls, lakes, glaciers
5. Castle Mountain

6. Chief Mountain
7. Many Glacier
8. DO not remember
9. DO not remember
10. Flathead lake
11. Flathead lake, GNP, Waterton, East side wilderness, Jasper National Park
12. GNP
13. GNP
14. GNP
15. GNP, Flathead and Whitefish Lakes, Swan Lake, Bowman Lake, Holland Lake, Flathead River, Stillwater River, Whitefish
16. GNP, Waterton
17. GNP
18. Glacier Park Lodge
19. Going to the sun Road
20. Going to the sun Road
21. Lake McDonald
22. Many locations in and around GNP
23. St. Mary, Lake McDonald, Swiftcurrent Lake, Avalanche Lake, Grinnell Glacier
24. Waterton
25. waterfalls
26. Yellowstone

Question: Please tell us the name(s) and location(s) of the Wilderness(s).

- | | |
|--------------------------------------|-------------------------------------------------------------|
| 1. Going to the Sun Road | 11. Glacier/Waterton |
| 2. Banff national park | 12. GNP |
| 3. Bow Crow Forest | 13. Goat Lick Mountain, Blackfeet reservation, Many Glacier |
| 4. Canyon Church Camp | 14. Lake McDonald |
| 5. Do not remember | 15. GNP |
| 6. Flathead Lake | 16. Stillwater Forest, Spencer Butte |
| 7. Elk Lakes PP | 17. Waterton |
| 8. Glacier | 18. Bowman Lake |
| 9. Glacier and Waterton | |
| 10. Glacier International Peace Park | |

Question: Please tell us the name(s) and location(s) of the trail(s).

1. (Mountain biked) Alice in Plunderland/Maple Syrup/Spooky Pete's-Spencer Butte, Whitefish Trail, Avalanche Creek, The Cedars, Lion Mountain,
2. All over Glacier National Park. Too many spots to be specific.
3. all over east west glacier
4. App trail

5. Avalanche lake, St Mary's lake, Trail of the Cedars, Running Eagle Falls Nature Trail, Swiftcurrent Nature Trail, Hidden Lake Nature Trail, Garden Wall, Sun Point Nature Trail
6. Blakiston Falls Red Rock Canyon Cameron Lake
7. cameron lake sde trails
8. can't remember name
9. Can't remember, but many trails in Glacier and Waterton.
10. Crandell Lake Trail, Bertha Trail,
11. Flathead Lk
12. Glacier International Peace Park
13. Glacier National Park, various trails
14. Hidden lake, rail of cedars, sun point nature trail , swift current nature trail,
Hike to Hidden Lake at Logan's Pass, hike to Avalanche Gorge at Lake McDonald, other various area's that I can't recall. WANTED to but did not have time to hike to St. Mary's Falls in Glacier Park.
15. lake Bowman
16. Lake Swifcurrent hiking trail; Hidden Lake trail. Many small trails.
17. Logan Pass
18. many trails in national parks
19. multiple trails in glacier
20. Numerous short trails along the Going to the Sun road
21. Trail located at top of logans pass
22. Walk of the Cedars, Avalanche Lake Trail, Saint Mary/Virginia Falls Trail, Two Medicine Lake Loop Trail
23. Whitefish area, Glacier park

Question: Please tell us the name(s) and location(s) of the festival(s).

- | | |
|--------------------------|-----------------------|
| 1. Don't remember | 5. Festival |
| 2. Huckleberry festival | 6. Whitefish Carnival |
| 3. Indian Days, Browning | |
| 4. Waterton Wildflower | |

Question: Please tell us the name(s) and location(s) of the farmer's market(s).

1. Local one in Polson
2. West Glacier and Whitefish
3. Whitefish Farmer's Market on a Tuesday night

Question: Please tell us the name(s) and location(s) of the shop/boutiques(s).

- | | |
|--------------------------------|-----------------------------------------------------------------------|
| 1. Bella Rose | 5. Whitefish |
| 2. Chocolate shop | 6. Wild Rose, Stumptown Ski Shop, Sportsman ski house, Coffee Traders |
| 3. Do not remember | |
| 4. Many in Missoula and Polson | |

Question: Please tell us the name(s) and location(s) of the visitor center(s).

1. All centers in Glacier National Park.
2. all in glacier
3. All in Glacier & International Peace park
4. Apgar in Glacier
5. At summit of Going to the Sun road
6. Banff
7. Cardston , Kalispell
8. east and west glacier
9. Every visitor center we happened by, We like the information provided at each.
10. Glacier National Park
11. Glacier Park
12. Glacier, MSO
13. logan pass
14. Logan Pass
15. Logan Pass Visitor Center, Apgar Visitor Center, St. Mary Visitor Center, Man Glacier
16. Rocky Mtn Elk Federation
17. St Mary's Lake Mc Donald area
18. waterton lakes
19. west glacier, est glacier, logan pass
20. Whitefish/ kalispell

Question: Please tell us the name(s) and location(s) of the wildlife watching site(s).

1. all along the road to Whitefish , Columbia falls etc. we saw wildlife all along the way
2. Banff and along the surrounding roads
3. Canyon camp - met a cougar face-to-face on last night at camp also bears Saw a grizzly coming down the mountain side on way out of Waterton
4. Contenental Divide
5. Don't remember site names at this time
6. Glacier National Park
7. Glacier Park
8. Goat Lick in Glacier Park and Hidden Lake
9. logan pass
10. logan pass and national parks areas
11. Logan Pass, Glacier National Park, Bison range Blackfeet Indian Reservation
12. Many Glaciers bear watching near the campground; Mountain sheep watching at Hidden Lake trail.
13. Ninepipes
14. On the road going into Apgar village Logan pass
15. Salt Slick Goat Viewing Area
16. Zoo

Question: Please tell us the name(s) and location(s) of the museum(s).

1. Conrad House, Historical Society in Whitefish
2. Do not recall
3. Do not remember, in Missoula
4. Museum of the Plains Indians, Browning
5. Plains Indians in Browning
6. St. Eugene

Question: Please tell us the name(s) and location(s) of the art gallery(s).

1. All galleries in downtown Whitefish
2. Big Fork
3. Charlie Russell
4. Do not recall
5. Edison

Question: Please tell us the name(s) and location(s) of the performing arts venue(s).

1. Banff
2. Bigfork
3. Children's theatre
4. Lake McDonald Lodge and East Glacier Lodge- Indian folk singer

Question: Please tell us the name(s) and location(s) of the historical site(s).

- | | |
|--------------------------------------|--------------------------------------------------------------------|
| 1. All lodges | 11. Polson |
| 2. GNP | 12. Ranger station at east entrance |
| 3. Can't remember | 13. Smashin the head Buffalo site |
| 4. Continental Divide | 14. St. Eugene |
| 5. Do not remember | 15. the obelisk marking on the Continental Divide south end of GNP |
| 6. Do not remember | 16. Waterton Park |
| 7. Izak Walton Inn | 17. Waterton Park |
| 8. Hungry Horse Dam | 18. Waterton Park |
| 9. Lake McDonald Lodge | |
| 10. Northern Pacific Railroad lodges | |

Question: Please tell us the name(s) and location(s) of the tour guiding company(s).

1. Glacier Park Inc
2. guided helicopter
3. trip Raft tour
4. Red Bus
5. Red Bus in the part to Canada
6. Waterton Lake to Goat Haunt Boat
7. Whitewater rafting in bolton